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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/737,103	12/15/2003	Takahiro Miyake	(70904) 60431	5510

21874 7590 11/15/2006

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EXAMINER	
COLEMAN, VANESSA V	

ART UNIT	PAPER NUMBER
2112	

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/737,103	MIYAKE, TAKAHIRO	
	Examiner	Art Unit	
	Vanessa (Brandi) Coleman	2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 5-14* is/are rejected.

7)☒ Claim(s) *4* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☒ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/15/03 & 5/20/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claim 1 is objected to because of the following informalities: line 4 of claim one states "said optical disk comprising." It is understood applicant intends to state, "said optical disk reproducing device comprising." Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 5-14 rejected under 35 U.S.C. 102(e) as being anticipated by Nishi, et al., U.S. Patent Application Publication Number US 2003/0179671 (hereinafter "Nishi").

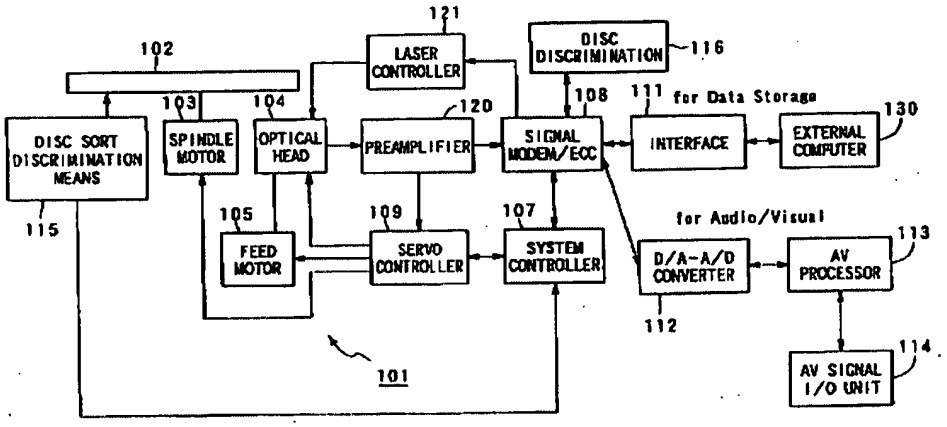


FIG. 1

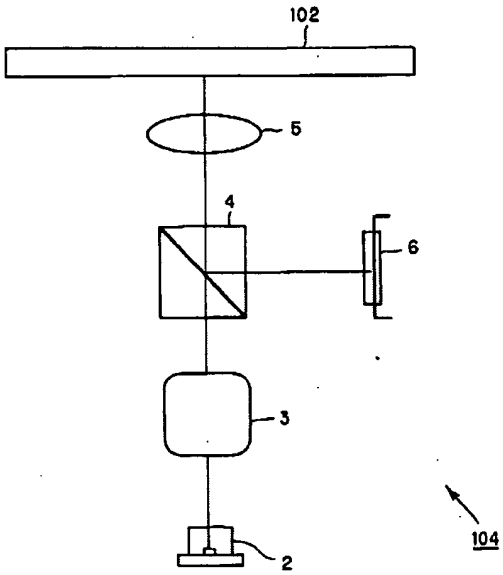

102
5
4
6
3
2
104

FIG. 2

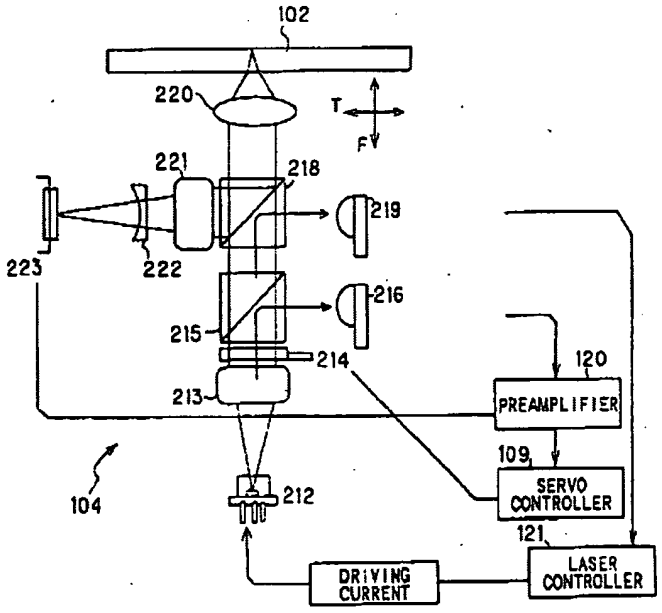

102
220
T
F
221
218
219
223
222
216
215
214
213
120
PREAMPLIFIER
109
SERVO CONTROLLER
121
LASER CONTROLLER
104
212
DRIVING CURRENT

FIG. 3

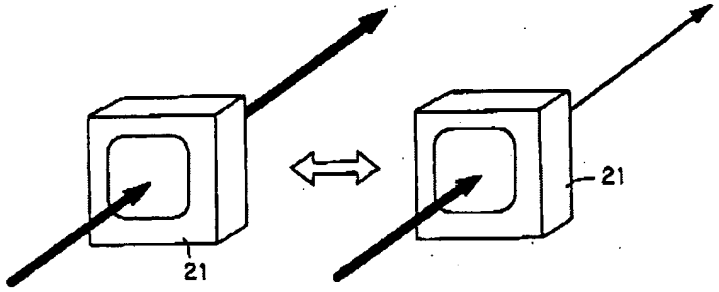
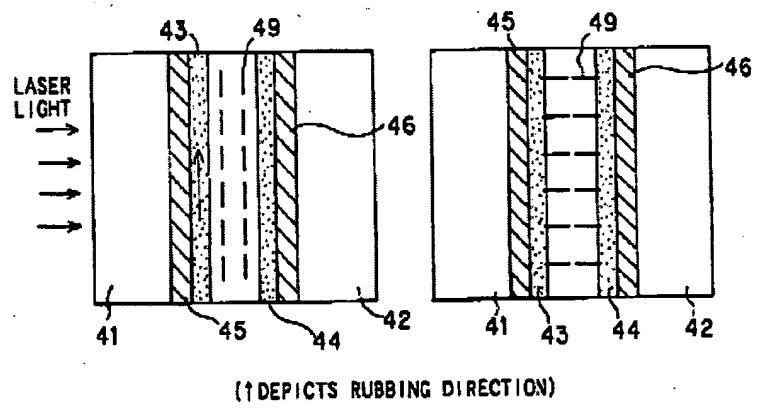


FIG. 6A FIG. 6B

FIG. 10A FIG. 10B



For claim 1, Nishi teaches:

An optical pickup (optical head 104) installed in an optical disk reproducing device (see the Abstract and [0014]) for reproducing information from an optical disk by projecting a laser on the optical disk (optical disk 102), the device including:

Laser source power control means (laser controller 121) for controlling power of a laser source (light source 2, semiconductor laser element 212) to switch

operation modes between a low-power operation mode and a high-power operation mode (see [0054]); and

Attenuating means for attenuating (optical coupling efficiency varying element 3; see also [0014] and [0066], noting that the recording/read mode is equivalent to the low power operation mode), only in the low-power operation mode, a laser beam emitted by a laser source onto the optical disk.

For claim 2, Nishi teaches:

The optical pickup as set forth in claim 1 (104), wherein the attenuating means includes a polarization beam splitter (beam splitter 4, 215) disposed in an optical path between the laser source (2, 212) and the optical disk (102), and a polarization rotating element (optical coupling efficiency element 3, liquid crystal element 214) disposed between the laser source and the polarization beam splitter. Note that Nishi discloses the polarization effect on the light beam of elements 215 and 214 (see [0071]). Additionally, Nishi discloses use of a servo controller 109 to control the liquid crystal element 214, which indicates the liquid crystal element 214 is a rotating element.

For claim 3, Nishi teaches:

The optical pickup as set forth in claim 2 (104), wherein the polarization rotating element is a liquid crystal element (215) with a liquid crystal layer (49; see [0154]) for generating a phase difference in the laser beam in response to applied electric field in the low-power operation mode (see [0156 – 0158]).

For claim 5, Nishi teaches:

The optical pickup as set forth in claim 1 (104), wherein the attenuating means is a reflecting element (3) for reflecting part of incident light from the laser source, or an absorbing element (3) for absorbing part of incident light from the laser source (see [0132]).

For claim 6, Nishi teaches:

The optical pickup as set forth in claim 5 (104), wherein the reflecting element or the absorbing element is a liquid crystal element with a liquid crystal layer (21) that serves as the reflecting element or the absorbing element in response to applied electric field in the low-power operation mode (see [0136 – 1037]).

For claim 7, Nishi teaches:

The optical pickup as set forth in claim 1 (104), wherein the attenuating means includes at least a liquid crystal element with a liquid crystal layer (3, 215, 21), and the liquid crystal element serves to attenuate the incident laser beam on the optical disk in response to applied electric field to the liquid crystal layer in the low-power operation mode (see [0066]).

For claim 8, Nishi teaches:

An optical disk reproducing device (optical recording medium driving device 101) for reproducing information from an optical disk by projecting a laser beam on the optical disk (see Abstract, [0014]), including: an optical pickup (104) operable to reproduce information in a low-power operation mode and a high-power operation mode by switching the two operation modes (see Abstract, [0081], noting that recording is performed during the low-power operation mode and reproduction performed during the high power operation mode), the optical pickup including attenuating means for attenuating (3 & 4; 214 & 215), only in the low-power operation mode, a laser beam emitted by a laser source onto the optical disk (see [0066]).

For claim 9, Nishi teaches:

The optical disk reproducing device as set forth in claim 8 (101), wherein: the optical disk reproducing device is operable to reproduce information from a single-layer disk and a bi-layer disk (see [0045], [0060]); and the optical pickup is operated in the low-power operation mode when reproducing information from the single-layer disk, and the optical pickup is operated in the high-power operation mode when reproducing information from the bi-layer disk (see [0010]).

In [0010] of Nishi, it is disclosed that multi-layered optical recording media (optical disks) require 1.5 to 2 or more times as much power to record and reproduce information as single layer optical recording media. It is to be expected, then, that the optical head would use low power when reproducing

information from a single layer disk, thus operating in a low-power mode. Likewise, it would be expected that the optical head would use high power when reproducing from a multi-layered disk, thus operating in a high-power mode.

For claim 10, Nishi teaches:

The optical disk reproducing device as set forth in claim 8 (101), wherein: the optical disk reproducing device is operable to reproduce information at a normal speed and at a double or faster speed (see [0044]); and the optical pickup is operated in the low-power operation mode when reproducing information at a normal speed, and the optical pickup is operated in the high-power operation mode when information is reproduced at a double or faster speed (see [0011]).

In [0011] of Nishi, it is disclosed that an increase in the velocity (speed) of an optical recording medium (optical disk) results in requiring a larger recording and reproducing operating power. It is to be expected, then, that the optical head would use low power when operating at a normal velocity (speed), thus operating in a low-power mode. Likewise, it would be expected that the optical head would use high power when operating at an increased (faster) velocity (speed), thus operating in a high-power mode.

For claim 11, Nishi teaches:

The optical disk reproducing device as set forth in claim 9 (101), wherein: the optical disk reproducing device is operable to record information in the optical disk (see Abstract, [0014]); and the optical pickup is operated in the high-power operation mode when recording information (see [0006]).

In [0006] of Nishi, it is disclosed that operating in a recording mode requires about 5 to 20 times more power than operating in a reproducing mode. It is to be expected, then, that the optical head would use high power when reproducing, thus operating in a high-power mode.

For claim 12, Nishi teaches:

The optical disk reproducing device as set forth in claim 10 (101), wherein: the optical disk reproducing device is operable to record information in the optical disk (see Abstract, [0014]); and the optical pickup is operated in the high-power operation mode when recording information (see [0006]).

In [0006] of Nishi, it is disclosed that operating in a recording mode requires about 5 to 20 times more power than operating in a reproducing mode. It is to be expected, then, that the optical head would use high power when reproducing, thus operating in a high-power mode.

For claim 13, Nishi teaches:

The optical disk reproducing device (101) as set forth in claim 8, wherein the attenuating means includes: a polarization beam splitter (215) disposed in an optical path between the laser source (212) and the optical disk (102); and a liquid crystal element (214, 21) with a liquid crystal layer (49), disposed between the laser source (212) and the polarization beam splitter (215), for generating a phase difference in the laser beam in response to applied electric field in the low-power operation mode (see [0156 – 0158]).

For claim 14, Nishi teaches:

> The optical disk reproducing device as set forth in claim 13 (101), further comprising: monitor means for detecting a quantity of the laser beam (219); and laser source power control means for controlling output of the laser source based on a result of detection by the monitor means (121), wherein the laser source power control means switches control operations between the low-power operation mode and the high-power operation mode (see [0074]).

Allowable Subject Matter

4. Claims 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Watabe	(US-2002/0018419)
Kase et al.	(US-6,411,588)
Takehara et al.	(US-2003/0063530)
Nishi et al.	(US-2003/0179671)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vanessa (Brandi) Coleman whose telephone number is (571) 272-9081. The examiner can normally be reached on Monday thru Friday 8-5:30 EST, First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jayprakash Ghandi can be reached on (571) 272-9820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Vanessa (Brandi) Coleman
Examiner
Art Unit 2112

VC

JAYPRAKASH GANDHI
SUPERVISORY PATENT EXAMINER